

WE CLAIM:

1. A cosmetic and/or dermatological composition comprising, in a cosmetically and/or dermatologically acceptable support:

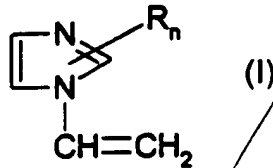
at least one nanopigment in said composition,

at least one polyamino polymer in said composition selected from:

(A) polyalkylenepolyamine polymers selected from:

- (i) polyalkylenepolyamines;
- (ii) alkyl derivatives of polyalkylenepolyamines;
- (iii) addition products of alkylcarboxylic acids with polyalkylenepolyamines;
- (iv) addition products of ketones and aldehydes with polyalkylenepolyamines;
- (v) addition products of isocyanates and isothiocyanates with polyalkylenepolyamines;
- (vi) addition products of alkylene oxide and polyalkylene oxide block polymers with polyalkylenepolyamines;
- (vii) quaternized derivatives of polyalkylenepolyamines;
- (viii) addition products of a silicone with polyalkylenepolyamines;
- (ix) copolymers of dicarboxylic acid and of polyalkylenepolyamines;

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- (B) polyvinylimidazoles;
 - (C) polyvinylpyridines;
 - (D) addition products of 1-vinylimidazole monomers of formula (I):



in which:

- radicals R independently represent H or a linear or cyclic, saturated or unsaturated C₁-C₆ alkyl radical,
 - n is an integer ranging from 1 to 3,
- with polyalkylenepolyamines (A)(i) to (A)(ix);
- (E) amino acid polymers with a basic side chain; and
 - (F) crosslinked derivatives of polymers (A)(i) to (A)(ix), (B), (C), (D) and (E).

2. A cosmetic and/or dermatological composition according to claim 1, wherein said polyalkylenepolyamines comprise from 7 to 20,000 repeating units

3. A cosmetic and/or dermatological composition according to claim 1, wherein said at least one polyamino polymer is selected from polyamino polymers comprising at least 5% of tertiary amine functions.

4. A cosmetic and/or dermatological composition according to claim 3, wherein said at least one polyamino polymer is selected from polyamino polymers comprising at least 10% of tertiary amine functions.

5. A cosmetic and/or dermatological composition according to claim 4, wherein said at least one polyamino polymer is selected from polyamino polymers comprising at least 20% of tertiary amine functions.

6. A cosmetic and/or dermatological composition according to claim 1, wherein said at least one polyamino polymer is selected from:

- (A)
- (i) hyperbranched polyethyleneimines;
 - (ii) quaternized polyethyleneimine derivatives;
 - (iii) addition products of alkylcarboxylic acids with polyethyleneimine;
 - (iv) addition products of ketones and aldehydes with polyethyleneimine;
 - (v) addition products of isocyanates and isothiocyanates with polyethyleneimine;
 - (vi) addition products of alkylene oxide and polyalkylene oxide block polymers with polyethyleneimine;
 - (vii) quaternized polyethyleneimine derivatives;
 - (viii) addition products of a silicone with polyethyleneimine;
 - (ix) copolymers of a dicarboxylic acid and polyethyleneimine; and
- (B) polyvinylimidazoles.

7. A cosmetic and/or dermatological composition according to claim 6,

wherein said at least one polyamino polymer is selected from:

- (A) (i) hyperbranched polyethyleneimines; and
- (A) (vi) addition products of either ethylene oxide or polyethylene oxide block polymers with polyethyleneimine.

8. A cosmetic and/or dermatological composition according to claim 7,

wherein said at least one polyamino polymer is selected from hyperbranched polyethyleneimines.

9. A cosmetic and/or dermatological composition according to claim 1, wherein said at least one nanopigment is selected from metal oxides.

10. A cosmetic and/or dermatological composition according to claim 9, wherein said at least one nanopigment is selected from titanium oxide, zinc oxide, cerium oxide and zirconium oxide.

11. A cosmetic and/or dermatological composition according to claim 10, wherein said at least one nanopigment is titanium oxide.

12. A cosmetic and/or dermatological composition according to claim 1, wherein said at least one nanopigment is present in an amount ranging from 0.1 to 20% by weight relative to the total weight of said cosmetic and/or dermatological composition.

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13. A cosmetic and/or dermatological composition according to claim 12, wherein said at least one nanopigment is present in an amount ranging from 0.25 to 15% by weight relative to the total weight of said cosmetic and/or dermatological composition.

14. A cosmetic and/or dermatological composition according to claim 1, wherein said at least one polyamino polymer is present in an amount ranging from 0.05 to 10% by weight relative to the total weight of said cosmetic and/or dermatological composition.

15. A cosmetic and/or dermatological composition according to claim 14, wherein said at least one polyamino polymer is present in an amount ranging from 0.5 to 5% by weight relative to the total weight of said cosmetic and/or dermatological composition.

16. A cosmetic and/or dermatological composition according to claim 1, wherein said cosmetic and/or dermatological composition further comprises at least one photo-oxidizable fatty substance.

17. A cosmetic and/or dermatological composition according to claim 16, wherein said at least one photo-oxidizable fatty substance is selected from photo-oxidizable fatty substances with iodine values ranging from 5 to 200.

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18. A cosmetic and/or dermatological composition according to claim 1, containing a fatty phase including at least one oil and wherein the degree of unsaturation (C) of the fatty phase of said cosmetic and/or dermatological composition, defined by the formula:

$$C = \sum_{i=1}^n [V.I.]_i * [T.H]_i$$

in which

[V.I.]_i represents the iodine value of the oil i, and

[T.H.]_i represents the weight percentage relative to the total weight of said fatty phase, ranges from 2.5 to 4000.

19. A cosmetic and/or dermatological composition according to claim 18, wherein said degree of unsaturation (C) of the fatty phase of said composition ranges from 50 to 4000.

20. A cosmetic and/or dermatological composition according to claim 16, wherein said at least one photo-oxidizable fatty substance is present in an amount ranging from 0.5 to 60% by weight relative to the total weight of said cosmetic and/or dermatological composition.

21. A cosmetic and/or dermatological composition according to claim 1, wherein said cosmetic and/or dermatological composition further comprises at least one protein or protein derivative.

22. A cosmetic and/or dermatological composition according to claim 1, wherein said composition further comprises at least one oil.

23. A cosmetic and/or dermatological composition according to claim 22, wherein said at least one oil is selected from apricot oil, sweet almond oil, groundnut oil, avocado oil, candlenut oil, borage oil, camellia oil, false flax oil, safflower oil, blackcurrant oil, cereal oil, chayote oil, coconut oil, rapeseed oil, coriander oil, cotton oil, cumin oil, cynara oil, evening primrose oil, perilla oil, cod liver oil, corn germ oil, jojoba oil, kiwi oil, lanolin oil, lychee oil, linseed oil, longan oil, mango oil, hazelnut oil, olive oil, palm oil, passionflower oil, grapeseed oil, cluster pine oil, Italian stone pine oil, pistachio oil, musk rose oil, sesame oil, shorea oil (floor grease), soybean oil, rice bran oil, turtle oil, sunflower oil, whale oil, tea oil, karite butter and vitamin F triglycerides.

24. A cosmetic and/or dermatological composition according to claim 1, wherein said composition further comprises at least one metal-complexing agent.

25. A cosmetic and/or dermatological composition according to claim 21, wherein said at least one metal-complexing agent is selected from

3-ethylenediaminetetra(methylenephosphonic acid), diethylenetriaminepenta(methylenephosphonic acid) and diethylenetriaminepentaacetic acid, and sodium salts thereof.

26. A cosmetic and/or dermatological composition according to claim 25, wherein said at least one metal-complexing agent is present in an amount ranging from 0.005% to 0.1% by weight relative to the total weight of said cosmetic and/or dermatological composition.

27. A cosmetic and/or dermatological composition according to claim 1, wherein said cosmetic and/or dermatological composition is in the form of an oil-in-water or water-in-oil emulsion, a solution, a gel, a vesicular dispersion, a solid, a foam, a mousse, or a spray.

28. A cosmetic and/or dermatological composition according to claim 1, wherein said cosmetic and/or dermatological composition further comprises at least one conventional cosmetic adjuvant.

29. A method of treating the signs of ageing of the skin or the hair comprising applying at least one dermatological composition according to claim 1 to said skin or hair.

30. A method according to claim 29, wherein said signs of ageing are induced by photo-peroxidation.

31. A method according to claim 30, wherein said signs of ageing are induced by photo-peroxidation of squalene or collagen.

32. A topical cosmetic treatment process for combatting or preventing signs of ageing comprising:

topically applying at least one cosmetic composition according to claim 1 to the skin, scalp, or hair.

33. A cosmetic or dermatological composition for protecting the human epidermis or the hair against ultraviolet rays comprising at least one nanopigment in said composition and at least one polyamino polymer in said composition as defined in claim 1.

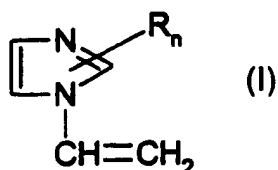
34. A cosmetic or dermatological composition according to claim 33 wherein said composition is an antisun composition or a make-up product.

35. A cosmetic or dermatological composition for combatting or preventing light-induced irritation, inflammation, immunosuppression or acne comprising comprising at least one nanopigment in said composition and at least one polyamino polymer in said composition as defined in claim 1.

36. A process for conserving cosmetic, pharmaceutical, veterinary or agrifood compositions containing at least one photo-oxidizable lipid, protein or protein derivative comprising incorporating in said composition at least one polyamino polymer selected from:

- (A) polyalkylenepolyamine polymers selected from:
 - (i) polyalkylenepolyamines;
 - (ii) alkyl derivatives of polyalkylenepolyamines;

- (iii) addition products of alkylcarboxylic acids with polyalkylenepolyamines;
- (iv) addition products of ketones and aldehydes with polyalkylenepolyamines;
- (v) addition products of isocyanates and isothiocyanates with polyalkylenepolyamines;
- (vi) addition products of alkylene oxide and polyalkylene oxide block polymers with polyalkylenepolyamines;
- (vii) quaternized derivatives of polyalkylenepolyamines;
- (viii) addition products of a silicone with polyalkylenepolyamines;
- (ix) copolymers of dicarboxylic acid and polyalkylenepolyamines;
- (B) polyvinylimidazoles;
- (C) polyvinylpyridines;
- (D) addition products of 1-vinylimidazole monomers of formula (I):



in which:

- radicals R independently represent H or a linear or cyclic, saturated or unsaturated C₁-C₆ alkyl radical,

- n is an integer ranging from 1 to 3,
with polyalkylenepolyamines (A)(i) to (A)(ix);

(E) amino acid polymers with a basic side chain; and

(F) crosslinked derivatives of polymers (A)(i) to (A)(ix), (B), (C), (D) and (E).

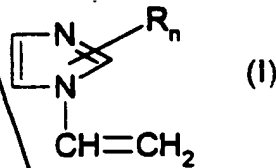
37. An antioxidant composition comprising at least one polyamino polymer in

said composition selected from:

(A) polyalkylenepolyamine polymers selected from:

- (i) polyalkylenepolyamines;
- (ii) alkyl derivatives of polyalkylenepolyamines;
- (iii) addition products of alkylcarboxylic acids with polyalkylenepolyamines;
- (iv) addition products of ketones and aldehydes with polyalkylenepolyamines;
- (v) addition products of isocyanates and isothiocyanates with polyalkylenepolyamines;
- (vi) addition products of alkylene oxide and polyalkylene oxide block polymers with polyalkylenepolyamines;
- (vii) quaternized derivatives of polyalkylenepolyamines;
- (viii) addition products of a silicone with polyalkylenepolyamines;

- (ix) copolymers of dicarboxylic acid and polyalkylenepolyamines;
- (B) polyvinylimidazoles;
- (C) polyvinylpyridines;
- (D) addition products of 1-vinylimidazole monomers of formula (I):



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with polyalkylenepolyamines (A)(i) to (A)(ix);

- (E) amino acid polymers with a basic side chain; and
- (F) crosslinked derivatives of the polymers (A)(i) to (A)(ix), (B), (C), (D) and (E).

3β. A method for providing antioxidation properties to a substrate or composition subject to oxidation comprising the step of contacting said substrate or composition with at least one polyamino polymer selected from:

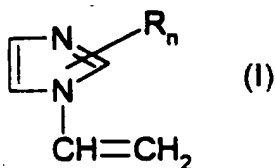
- (A) polyalkylenepolyamine polymers selected from:
 - (i) polyalkylenepolyamines;
 - (ii) alkyl derivatives of polyalkylenepolyamines;

- (iii) addition products of alkylcarboxylic acids with polyalkylenepolyamines;
- (iv) addition products of ketones and aldehydes with polyalkylenepolyamines;
- (v) addition products of isocyanates and isothiocyanates with polyalkylenepolyamines;
- (vi) addition products of alkylene oxide and polyalkylene oxide block polymers with polyalkylenepolyamines;
- (vii) quaternized derivatives of polyalkylenepolyamines;
- (viii) addition products of a silicone with polyalkylenepolyamines;
- (ix) copolymers of dicarboxylic acid and polyalkylenepolyamines;

(B) polyvinylimidazoles;

(C) polyvinylpyridines;

(D) addition products of 1-vinylimidazole monomers of formula (I):



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with polyalkylenepolyamines (A)(i) to (A)(ix);

- (E) amino acid polymers with a basic side chain; and
- (F) crosslinked derivatives of the polymers (A)(i) to (A)(ix), (B), (C), (D) and (E).

39. A method according to claim 38, wherein said substrate is human epidermis or hair.

40. A method for curative or preventive treatment of irritation, inflammation, immunosuppression or acne comprising applying at least one cosmetic and/or dermatological composition according to claim 1 to a substrate or composition in need of such treatment.

41. A method according to claim 40, wherein said substrate is human epidermis or hair.

42. A method for inhibiting the peroxidation of lipids induced by UV radiation comprising the step of contacting said lipids with at least one cosmetic and/or dermatological composition according to claim 1.

43. A method for inhibiting the peroxidation of proteins and protein derivatives induced by UV radiation comprising applying to said proteins and protein derivatives at least one cosmetic and/or dermatological composition according to claim 1.

44. A process for conserving a cosmetic, an agrifood and/or a pharmaceutical composition comprising at least one photo-oxidizable lipid or protein or protein derivative, comprising including in said composition at least one polyamino polymer according to claim 1.

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